3. No source for the loaded labor rate of $35 per hour was provided. AT&T/MCI adjust this labor rate in HAI R5.0a by a regional labor factor adjustment, which varies by state. Nonetheless, no support has been provided for the regional labor adjustment factors sponsored by AT&T/MCI, and no evidence has been provided that shows that the resulting labor rates have any relationship to the actual labor rates being paid in the various states. For example, using the regional labor adjustment factor sponsored by AT&T/MCI in Tennessee of 0.70, the resulting net labor cost of $29.00 per hour[1] is substantially below the actual labor rate paid by BellSouth in that state.

4. The drop distances used in HAI R5.0a are based on various assumptions and hypothetical situations without any backup. The model uniformly assumes that all lot sizes are twice as deep as they are wide and hypothesizes the length of the various setbacks required. No validation of any of these assumptions for BST was provided.

5. The installation time for aerial drop placement is based upon the "opinion of expert outside plant engineers and estimators." No backup was provided.

6. The estimate for buried drop placement is based upon price quotes from contractors for a set of specifications that has not been provided.

7. The stated basis for the default buried drop sharing fraction in HAI R5.0a is virtually identical to the support provided for the same input in HM R3.1. With this almost identical support, the value for the input has been changed from 1.0 in HM R3.1 to 0.5 in HAI R5.0a. This change in input is said to be based upon "judgement of outside plant experts" that buried drops will normally be used with buried distribution cable. The support goes on to say that although many cases would result in three way sharing of such structure, a conservative approach was used at 50% sharing.

   Contrast this with the support provided in HM R3.1 which stated, "even though opportunities may arise in new construction, and could justify a smaller allocation, the model presently uses no sharing of buried drop wire trench as a default value." The

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[1]

$ 35.00	Hourly labor rate
57.1%	Portion affected by regional labor adjustment
$ 20.00	Hourly rate affected by regional labor adjustment
- 30%	1 - AT&T/MCI's regional labor adjustment for Tennessee
$ (6.00)	Hourly reduction due to regional labor adjustment factor in Tennessee
35.00	Default hourly labor rate
$ 29.00	Loaded hourly labor rate as adjusted by AT&T/MCI.

change in input value between HM R3.1 and HAI R5.0a will have a considerable impact in reducing overall cost. No workpapers or supporting documents were provided to support the basis of the changed assumption.

8. For buried drop cable investment per foot, the default value in HAI R5.0a is 14 cents per foot. However, MCI and AT&T appear to have gathered price quotes ranging from 14 cents to 20 cents per foot as shown in the HAI Inputs Portfolio (HIP).

9. MCI and AT&T did not state the specific steps they took to ensure that the default values for each of the UAIs for this Sensitive Input Group reflected the conditions of BST and did not state the results of the steps they undertook to make that assurance. Thus, there is no demonstration that the default values they have chosen (which presumably MCI and AT&T believe are forward-looking) are reflective of the conditions in BellSouth's territory.

10. MCI and AT&T did not state the basis upon which their experts developed their estimates for the default values used in applying HAI R5.0a, and did not provide workpapers and sources associated therewith, where the basis for the default values was claimed to be "expert opinion."

(3)
ALTERNATIVE VALUES BASED UPON COST AND OTHER DATA SPECIFIC TO BELLSOUTH

The following BellSouth-specific values were obtained for the user-adjustable inputs that make up Sensitive Input Group 1. BST supporting cost and operational data is contained in Exhibit 17

1. The BST-specific price for the residential and business NID case (B-1) is $7.14 plus state sales tax [which varies by state]. This is less than the HAI R5.0a default value.

2. The relevant BST-regional loaded labor rate for installation is $40.80 for 1997-1999. Compare Part (2), note 3, herein. No regional labor adjustment is required when the HAI R5.0a Application uses the labor rate specific to BST; therefore, the appropriate regional labor adjustment factor is 1.0. The 1997-1999 rate is the appropriate forward-looking rate to be used in this analysis.

3. The BST-specific time associated with the installation of the residential and business NID varies between 30 and 45 minutes. Compare Part (2), notes 1 and 5, herein. See Exhibit 17, lines 5 and 6.

4. The BST-specific time associated with travel is 22 to 35 minutes and is divided equally between the installation of the drop and the installation of the NID. Compare Part (2), note 2, herein. See Exhibit 17, lines 7 and 8.

5. The BST-specific price for the residential and business protection block (B-1) is $7.62 plus state-specific sales tax.

6. The average distance of drops in BST territory (B-2) is estimated to be 200 to 400 feet for aerial drops and 200 to 300 feet for buried drops. These are based upon judgement of BST personnel responsible for the installation of drops. In HAI R5.0a, the default average distance for the drop, based upon a line-weighted density, is approximately 70 feet. See Part (2), note 4, herein. The difference between the HAI R5.0a default value and the BST-specific values for drop distance are significant and must be kept in mind when evaluating the input value for the buried drop placement per foot (B-3).

   The drop lengths reflected above have been hotly disputed in numerous state-level proceedings. These disputes are of little importance, because BellSouth has fixed, arms-length contracts with local contractors to place buried drop cable for any length between 0 and 500 feet. In other words, the total cost of placement for buried drops is not affected by the average length of the drop. Therefore, despite the belief of the HAI authors that buried drop placement costs should vary by foot, they in fact do not - buried drop placement costs the same, whether the distance is 10 feet or 450 feet.

   The buried drop placement cost that we recommend, for each state, is based on that state's contracts for buried drop placement and the recommended drop distances incurred by BellSouth in each state. Since the model requires a buried drop placement input that is of a "cost per foot" nature, the appropriate buried drop placement input is BellSouth's negotiated state-specific contract cost, divided by the average buried and aerial drop distance. The average is used because HAI R5.0a has only one input for drop distance, which must therefore combine the estimated distances for buried and aerial drops, while having separate costs and treatment for buried versus aerial drops. The result of this combination of inputs for overall drop distance and for buried drop placement per foot results in the model computing a cost of buried drops equal to BellSouth's actual incurred costs. It must be emphasized that, while the distance does not matter, the distance input is critical since the input for buried cost placement has been determined consistent with the recommended inputs for drop distance.

7. There is no indication that the arbitrary change in assumption made between HM R3.1 [1.0] and HAI R5.0a [0.50] for buried drop sharing fraction (B-4) is appropriate or supportable. Even using a scorched node approach, there is no evidence that half of all buried drops would be shared with some other utility. It is unclear whether HAI R5.0a assumes that either the electric utility, the cable utility, or some other undefined entity

would also be in a scorched node approach and abandon all of their existing structures. This input appears to have been changed to artificially lower the overall loop cost determined by the model as compared to the assumption used in HM R3.1 which was deemed reasonable as recently as the middle of June 1997. We recommend that the appropriate forward looking input be 1.0, which is the same input included in HM R3.1.

8. The BST-specific material cost per foot for drop cable (B-8) is $0.07 for aerial and $0.13 for buried, plus sales tax.

Exhibit 4

Sensitive Input Group 2: Terminal and Splice

Exhibit 4

SENSITIVE INPUT GROUP 2: TERMINAL AND SPLICE

This Exhibit analyzes and evaluates HAI R5.0a default values, and identifies alternative values, for the following HAI R5.0a Appendix B user-adjustable inputs:

- B-7 Terminal and Splice

A description of this user-adjustable input can be found in the HAI Model Release 5.0a Inputs Portfolio.

We have determined that BST-specific data for terminal and splice investment per line cannot be extracted from BST's accounting system. BST accounts for these costs in an installation loading. This loading includes BST labor, contract labor and exempt materials billed to an account. The terminal identified in HAI R5.0a for this input are four pair terminals. In the BST accounting system, any terminal (or crossbox) that is 100 pair or less is considered exempt material that is not capitalized. The portion of this input that relates to the splice investment per line occurs through labor and does not include any special material. This labor is also accounted for in the loading and is billed to an account with many other labor activities.

It is possible to account for the impact of the terminal and splice investment per line when determining the appropriate cable cost together with all the appropriate loadings, including the loading for terminal and splice investment per line. The impact of this input will therefore be contained in the various BST-specific costs that will be taken into consideration in Exhibit 5. It is therefore appropriate to adjust the default values for input B-7 to zero and include in the impact as a loading for the appropriate default input in Exhibit 5.

Exhibit 5

Sensitive Input Group 3: Distribution Investment

Exhibit 5

SENSITIVE INPUT GROUP 3: DISTRIBUTION INVESTMENT

This Exhibit analyzes and evaluates HAI R5.0a default values, and identifies alternative values, for the following HAI R5.0a Appendix B user-adjustable inputs:

- B-10 Distribution Cable Cost, $ per Foot
- B-11 Riser Cable Cost, $ per Foot
- B-13 Buried Distribution Cable Sheath Multiplier
- B-14 Distribution Conduit Cost, $ per Foot
- B-15 Spare Tubes per Route (Distribution)
- B-16 Regional Labor Adjustment
- B-38 Serving Area Interface (SAI) Investment
- B-197 Underground Excavation, Cost per Foot
- B-198 Underground Restoration Cost per Foot
- B-199 Buried Excavation, Cost per Foot
- B-200 Buried Installation and Restoration, Cost per Foot

A description of each of these UAIs can be found in the HAI Model Release 5.0a Inputs Portfolio.

This Exhibit is structured in 3 parts: Part (1) identifies the UAIs in this Sensitive Input Group for which we have obtained forward-looking cost and other forward-looking data that is specific to BellSouth, Part (2) identifies the basis upon which MCI and AT&T state they have developed their default values for the UAIs in this Sensitive Input Group and contains some of our observations about these default values, and Part (3) identifies the alternative values to replace the default values in order to reflect forward-looking costs and other conditions, based on BellSouth data.

(1)
AVAILABILITY OF COST AND OTHER FORWARD-LOOKING DATA SPECIFIC TO BELLSOUTH

Forward-looking cost (*i.e.*, no embedded cost characteristics) and other forward-looking data specific to BellSouth have been obtained for the following user-adjustable inputs:

1. Input B-10 - Distribution Cable Cost

   - The cost per foot of *aerial* and *underground* copper distribution cable.[12]
   - Cost of installation including costs for:
     - BST labor and engineering
     - vendor engineering and installation
     - exempt materials

2. Input B-11 - Riser cable cost

   - In HAI R5.0a, the default cost of riser cable (B-11) has been increased approximately 25% over the cost of distribution cable (B-10). In the prior release, HM 4.0, the cost was assumed to be identical.

     This variable is used in insignificant amounts in the HAI Model as applied to BST using default inputs, because BST has very few clusters that are *both* smaller than 0.03 square miles with a density greater than 30,000 lines per square mile (*i.e.*, the conditions under which HAI R5.0a would install riser cable). BST-specific data shows that riser cable is installed in larger quantities and the installed cost of riser cable is significantly higher than installed aerial cable. Nonetheless, given the insignificant quantities reflected by the model, BST recommends the use of the default inputs for riser cable cost.

3. Input B-13 - Buried Distribution Cable Sheath Multiplier

   - The additional cost of buried distribution cable compared to the cost of aerial/underground distribution cable.

4. Input B-14 - Distribution Conduit Cost

   - The material cost related to distribution conduit per foot, based on BST-specific costs. BST accounting records do not segregate distribution conduit by itself, but aggregate distribution and feeder conduit costs and include manholes and related items. Since use of the BST costs will, therefore, combine distribution conduit, feeder conduit and manhole costs, the use of BellSouth costs as available are inappropriate for this input, which is for distribution conduit costs only. Because manholes are rarely placed in the distribution network, we recommend the use of the default input for B-14, distribution conduit cost.

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[12] Buried cable increases the aerial cable cost per foot, in all cross-sections, by input B-13, cable sheath multiplier.

5. Input B-16 - Regional Labor Adjustment

   - Since we recommend the use of BST-specific labor rates directly in the application of HAI R5.0a contained herein, no regional labor adjustment factor is necessary or appropriate.

6. Input B-38 - SAI Investment

   - The BST-specific costs are recommended for outdoor SAI investment. HAI R5.0a logic deploys only a small amount of indoor SAI investment. Therefore, we have not adjusted the default values for indoor SAIs.

7. Input B-197 through Input B-200 - Excavation and Restoration

   - Inputs B-197 through B-200 were newly developed for HM R4.0 to account for excavation and restoration in extreme detail. HAI R5.0a reflects the same default input values as HM R4.0 for these inputs, which account for underground excavation, underground restoration, buried excavation, and buried installation and restoration. As has been mentioned previously in the discussion of B-14, distribution conduit cost, BST accounting records to do not segregate distribution conduit by itself, but aggregate distribution and feeder placement costs in a composite figure.

(2)
MCI'S AND AT&T'S STATED BASIS FOR THEIR DEFAULT VALUES

MCI and AT&T claim the following basis for deriving the default values:

1. The cost per foot of copper distribution cable as a function of cable size (B-10) is based on 24 gauge copper for cable sizes below 400 pair, and 26-gauge copper for 400 pairs and larger, and contains assumptions that are alleged to be commonly made by outside plant planning engineers that the cost of cable material can be represented as an A+BX straight line equation for cable sizes below 400 pairs. It is alleged that while, in the past, the cost of copper cable was typically ($.50 + $.01 per pair) per foot, current costs are typically ($.30 + $.007 per pair) per foot. No backup or data for these estimates have been provided.

   Based upon the "opinion" of expert outside plant engineers, material costs associated with copper distribution cable represents approximately 40% of the total installed

costs. The experts further opine that the average cost of engineering for installed copper cable is 15% of the installed cost. The remaining 45% of the cost is assumed to represent direct labor for placing and splicing cable, exclusive of the cost of splicing block terminals into the cable. No backup or workpapers were provided to support these assumptions.

2. The additional cost of the filling compound used in buried cable to protect the cable from moisture (B-13), expressed as a multiplier (1.04) of the cost of aerial installed non-armored cable. No backup or workpapers was provided for this assertion.

3. The material cost per foot of 4 inch PVC pipe (B-14) is stated to be $0.60. The basis for this estimate is claimed to be contact made with several material suppliers. No detail was provided as to the nature of the specifications, location in the country, other particulars associated with the quote or other information for material prices received from material suppliers.

4. The labor rates assumed in the *default* HAI R5.0a inputs are as follows:

   - A fully loaded direct labor cost of $55 per hour for heavy construction of outside plant cable, for a placing or splicing technician who receives pay of $20 per hour.

   - HAI R5.0a assumes that the fully loaded direct labor component of $55 per hour accounts for 45% of the investment for copper feeder and copper distribution cable. Based upon this and other further assumptions, a labor adjustment factor is applied to 16.4% of the installed cost of copper cable.

   - The labor adjustment index (B-16) for each state is presented as the appropriate labor adjustment factor for direct labor costs related to some national average. No backup or workpapers for this determination has been presented.

5. The investment required for outdoor Serving Area Interfaces (B-38) are indicated to be more expensive than indoor Serving Area Interfaces, because outdoor SAIs require steel cabinets that protect the cross-connection termination for the direct effects of water. The basis of the default values is the opinion of a "group of engineering experts." No backup or workpapers were provided.

6. The inputs required for excavation and restoration, inputs B-197 through B-200 were developed based on estimates made by "a team of experienced outside plant experts." Additional information was obtained from printed resources identified as the 1997 National Construction Estimator, 45th edition. Still other information was provided by several contractors who allegedly routinely perform excavation, conduit and manhole placement work for telephone companies. The base information, backup, and

workpapers were not supplied. The HAI Inputs Portfolio does contain what is alleged to be a summary of the information received. There is a significant variation in the information received. For example, normal trenching in dirt with backfill to a 36 inch depth in a suburban environment has estimates ranging all the way from $2.00 per foot to $15.00 per foot. This represents a variation of over 700% (see §6.2, HAI R5.0a, Inputs Portfolio, January 5, 1998). Similarly, trenching in pavement with restoration metro areas to a depth of 36 inches apparently contains estimates ranging from below $10.00 per foot to in excess of $60.00 per foot (see §6.2, HAI R5.0a, Inputs Portfolio).

7. MCI and AT&T did not state the specific steps they took to ensure that the default values for each of the UAIs for this Sensitive Input Group reflected the conditions of the territory of BST or any other company, and did not state the results of the steps they undertook to make that assurance. Thus, there is no demonstration that the default values they have chosen (which presumably MCI and AT&T believe are forward-looking) are reflective of the conditions in BellSouth's territory.

8. MCI and AT&T did not state the basis upon which their experts developed their estimates for the default values used in applying HAI R5.0a and did not provide workpapers and sources associated therewith, where the basis for the default values was claimed to be "expert opinion."

(3)
ALTERNATIVE VALUES BASED UPON COST AND OTHER DATA SPECIFIC TO BELLSOUTH

The following BellSouth-specific values were obtained for the user-adjustable inputs that make up Sensitive Input Group 3. BST-specific cost and operational data is contained in Exhibit 17:

1. The BellSouth-specific costs per foot of copper distribution cable (B-10) including the costs of engineering, installation and delivery, as well as the material itself was determined for each cable size that is required by HAI R5.0a except for the two smallest sizes. The values of these two smallest sizes were interpolated from BellSouth-specific data. The BellSouth-specific costs, reflected on Exhibit 2, lines 79 - 90, were computed by multiplying appropriate state-specific in-plant factors, which account for the state-specific costs incurred in engineering, furnishing and installing cable, by the actual materials cost of purchased copper cable:

		Alabama	Florida	Georgia	Kentucky	Louisiana	Mississippi	N. Carolina	S. Carolina	Tennessee
In-plant factors		5.6380	8.1332	6.0580	4.5675	8.0264	5.8619	6.4412	10.0478	4.8258
Number of pairs	Material Cost	Installed Copper Cable Cost								
4,200	16.70	$ 94.14	$ 135.80	$ 101.15	$ 76.27	$ 134.02	$ 97.88	$ 107.55	$ 167.77	$ 80.58
3,600	14.31	80.69	116.40	86.70	65.37	114.88	83.90	92.19	143.81	69.07
3,000	11.93	67.24	97.00	72.25	54.48	95.73	69.91	76.82	119.84	57.56
2,400	9.54	53.79	77.60	57.80	43.58	76.58	55.93	61.46	95.87	46.04
1,800	7.12	40.14	57.91	43.13	32.52	57.15	41.74	45.86	71.54	34.36
1,200	4.78	26.95	38.88	28.96	21.83	38.37	28.02	30.79	48.03	23.07
900	3.57	20.13	29.04	21.63	16.31	28.65	20.93	23.00	35.87	17.23
600	2.42	13.64	19.68	14.66	11.05	19.42	14.19	15.59	24.32	11.68
400	1.61	9.08	13.09	9.75	7.35	12.92	9.44	10.37	16.18	7.77
200	0.94	5.30	7.65	5.69	4.29	7.54	5.51	6.05	9.44	4.54
100	0.55	3.10	4.47	3.33	2.51	4.41	3.22	3.54	5.53	2.65
50	0.38	2.14	3.09	2.30	1.74	3.05	2.23	2.45	3.82	1.83
25	0.27	1.52	2.20	1.64	1.23	2.17	1.58	1.74	2.71	1.30
12	0.22	1.23	1.77	1.32	1.00	1.75	1.28	1.40	2.19	1.05
6	0.19	1.09	1.58	1.18	0.89	1.56	1.14	1.25	1.95	0.94
Investment per foot		$ 0.0220	$ 0.0320	$ 0.0240	$ 0.0180	$ 0.0320	$ 0.0230	$ 0.0260	$ 0.0400	$ 0.0190

Note - the above table provides inputs for copper distribution and copper feeder cable.

2. As previously stated, it appears that HAI R5.0a as applied to BST produces the result that very little riser cable has been used by the model. Therefore, riser cable (B-11) has been set to default in this presentation.

3. The BST-specific value for the buried copper cable sheath multiplier (B-13) was determined by a direct comparison of the aerial material costs to the buried material costs for each size of cable contained in HAI R5.0a. The excess of buried material cost over the cost of aerial cable [excluding E, F&I] was computed, and then divided by the overall installed aerial cable cost [including E, F&I], consistent with the application of this input by the model Over all the various cable sizes, the multiplier varies between 1.020 and 1.044 for the 9 states.

Pairs	Buried Material Cost	Aerial Material Cost
25	$ 0.27	$ 0.27
50	0.32	0.38
100	0.56	0.55
200	1.04	0.94
300	1.50	1.30
400	2.07	1.61
600	2.92	2.42
900	4.29	3.57
1200	5.72	4.78
1500	7.25	5.93
1800	8.63	7.12
2100	10.02	8.44
2400	11.62	9.54
2700	12.95	10.73
3000	14.39	11.93
3600	17.26	14.31
4200	20.14	16.70
	$ 120.95	$ 100.52
Buried less aerial		$20.43

	In-Plant Factors	Total Installed Aerial Cost	Buried less Aerial Material Cost	Excess as % of Installed Aerial Cost
Alabama	5.6380	$ 566.74	$ 20.43	1.036
Florida	8.1332	817.57	20.43	1.025
Georgia	6.0580	608.96	20.43	1.034
Kentucky	4.5675	459.14	20.43	1.044
Louisiana	8.0264	806.83	20.43	1.025
Mississippi	5.8619	589.25	20.43	1.035
N. Carolina	6.4412	647.48	20.43	1.032
S. Carolina	10.0478	1,010.03	20.43	1.020
Tennessee	4.8258	485.10	20.43	1.042

4. As previously discussed, conduit costs (B-14) should be set to the default level of $0.60.

5. No change to the regional labor adjustment factor (B-16) is appropriate, since BST-

specific values for labor have been used wherever required.

6. The BST values for the investment required for outdoor SAIs (B-38) were determined from specific material costs and in-plant factors associated with this investment. Actual material prices were obtained for outdoor SAIs in the sizes of 600 through 1800. Smaller and large size SAI costs were then interpolated from the known information. It also should be noted that, since BellSouth does not separately track costs and installations of SAIs below 50 pair, the input price for 50 pair SAIs should be set to $0, as the cost of these installations is included and spread over the cost of all other SAIs.

		Alabama	Florida	Georgia	Kentucky	Louisiana	Mississippi	N. Carolina	S. Carolina	Tennessee
In-plant factors		5.6380	8.1332	6.0580	4.5675	8.0264	5.8619	6.4412	10.0478	4.8258
Outdoor SAI Size	Material Cost									
7,200	$ 4,970.90	$ 28,000	$ 40,400	$ 30,100	$ 22,700	$ 39,900	$ 29,100	$ 32,000	$ 49,900	$ 24,000
5,400	4,142.42	23,400	33,700	25,100	18,900	33,200	24,300	26,700	41,600	20,000
3,600	3,313.94	18,700	27,000	20,100	15,100	26,600	19,400	21,300	33,300	16,000
2,400	2,581.29	14,600	21,000	15,600	11,800	20,700	15,100	16,600	25,900	12,500
1,800	2,209.29	12,500	18,000	13,400	10,100	17,700	13,000	14,200	22,200	10,700
1,200	1,607.60	9,100	13,100	9,700	7,300	12,900	9,400	10,400	16,200	7,800
900	1,298.80	7,300	10,600	7,900	5,900	10,400	7,600	8,400	13,100	6,300
600	974.69	5,500	7,900	5,900	4,500	7,800	5,700	6,300	9,800	4,700
400	686.91	3,900	5,600	4,200	3,100	5,500	4,000	4,400	6,900	3,300
200	399.13	2,300	3,200	2,400	1,800	3,200	2,300	2,600	4,000	1,900
100	255.24	1,400	2,100	1,500	1,200	2,000	1,500	1,600	2,600	1,200
50		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

7. As previously mentioned in the discussion of input B-14, Distribution Conduit Cost, BST accounting records do not segregate distribution and a feeder placement cost, but rather aggregate them. These aggregated costs include related items such as manhole cost and related exempt materials.

   Information available on a BST-specific basis has been developed and indicates that, on a composite basis, underground excavation and restoration cost per foot (B-197 and B-198) varies between $4.79 and $13.56. These costs, which are based on the costs of installing conduit, are developed on lines 28 - 32 of Exhibit 17.

   Similarly, the BST composite value of buried excavation and restoration per foot (B-199 and B-200) varies between $2.26 and $6.85. These costs, which are based on the

costs of burying copper and fiber cable are developed on lines 33 - 54 of Exhibit 17.

The result of implementing inputs B-197 through B-200 should be the BST-specific cost derived for those activities combined. To implement this recommendation, specific composite values are used to derive the end result and are not the values that correspond to the individual input displayed. All other input values for inputs B-197 through B-200 are set to zero.

Exhibit 6

Sensitive Input Group 4: Copper Feeder Investment

Exhibit 6

SENSITIVE INPUT GROUP 4: COPPER FEEDER INVESTMENT

This Exhibit analyzes and evaluates HAI R5.0a default values, and identifies alternative values, for the following HAI R5.0a Appendix B user-adjustable inputs:

- B-13 Buried Feeder Cable Sheath Multiplier
- B-56 Copper Feeder Cable, $\Foot

A description of each of these UAIs can be found in the HAI Model Release 5.0a Inputs Portfolio.

AVAILABILITY OF COST AND OTHER FORWARD-LOOKING DATA SPECIFIC TO BELLSOUTH

The inputs in this section are almost entirely identical to the inputs B-10 and B-13 used in the previous section Exhibit 4, Distribution Investment.

Input B-13 is the same for Feeder as for Distribution, and input B-56 is virtually identical to input B-10. While B-10 contains values for the cost per foot of copper distribution cable between cable sizes 6 and 2400, input B-56 contains the cost per foot for cable sizes 100 through 4200. Costs for all utilized sizes are reflected in the table on page 6 of Exhibit 4.

HAI R5.0a has an additional UAI for Copper Feeder Investment per pair-foot of $0.0075. This is approximately equal to the HAI R5.0a default cost per pair-foot for 3000 pair cable, which is $0.0077. Based on the BST-specific values for copper feeder cable, the equivalent BST-specific value ranges from $0.018 to $0.040, as shown on Exhibit 2, line 338.

Exhibit 7

Sensitive Input Group 5: Fiber Feeder Investment

Exhibit 7

SENSITIVE INPUT GROUP 5: FIBER FEEDER INVESTMENT

This Exhibit analyzes and evaluates HAI R5.0a default values, and identifies alternative values, for the following HAI R5.0a Appendix B user-adjustable inputs:

- B-53 Buried Fiber Sheath Addition, $ per Foot
- B-57 Fiber Feeder Cable, $ per Foot

A description of each of these UAIs can be found in the HAI Model Release 5.0a Inputs Portfolio.

This Exhibit is structured in 3 parts: Part (1) identifies the UAIs in this Sensitive Input Group for which we have obtained forward-looking cost and other forward-looking data that is specific to BellSouth, Part (2) identifies the basis upon which MCI and AT&T state they have developed their default values for the UAIs in this Sensitive Input Group and contains some of our observations about these default values, and Part (3) identifies the alternative values to replace the default values in order to reflect forward-looking costs and other conditions, based on BellSouth data.

(1)
AVAILABILITY OF COST AND OTHER FORWARD-LOOKING DATA SPECIFIC TO BELLSOUTH

Forward-looking cost (*i.e.*, no embedded cost characteristics) and other forward-looking data specific to BellSouth have been obtained for the following user-adjustable inputs:

1. Input B-53 - Buried Fiber Sheath Addition

   - Costs were developed for both material and installation for aerial fiber cable, buried fiber cable, and underground fiber cable.

2. Input B-57 - Fiber Feeder Cable

   - The cost per foot of aerial fiber feeder cable was developed for both material costs and installation costs, for the number of fibers identified by HAI R5.0a.

   - Installation costs were developed based on actual factors expressing the relationship between material cost and total installed cost, including costs for,

BST labor and engineering, vendor engineering and installation and exempt materials.

(2)
MCI'S AND AT&T'S STATED BASIS
FOR THEIR DEFAULT VALUES

MCI and AT&T claim the following basis for deriving the default values:

1. The cost of dual sheathing for additional mechanical protection of buried fiber feeder cable (B-53) is based upon an estimate by a team of "experienced outside plant experts" who are alleged to have purchased millions of feet of fiber optic cable. No data or backup workpapers have been provided.

2. The cost per foot of fiber feeder cable (B-57) is based on an assumption allegedly commonly made by outside plant planning engineers. The assumption is that the cost of cable material can be represented as an A+BX straight line equation. It is alleged that as technology, manufacturing methods and competition have advanced, the price of cable has been reduced. It is contended that while, in the past, the cost of fiber cable was typically $0.50 + $0.10 per fiber, per foot, current costs are typically $0.30 + $0.05 per fiber, per foot.

   The cost of installation for aerial fiber cable is assumed to be $2.00 per foot, consisting of $0.50 per foot for engineering + $1.50 per foot for direct labor. These figures are estimates that have been provided by a team of outside plant engineering and construction personnel. No backup or workpapers have been provided.

   HAI 5.0a has an additional UAI for fiber feeder investment per strand-foot of $0.100.

3. MCI and AT&T did not state the specific steps they took to ensure that the default values for each of the UAIs for this Sensitive Input Group reflected the conditions of the territory of BST or any other company, and did not state the results of the steps they undertook to make that assurance. Thus, there is no demonstration that the default values they have chosen (which presumably MCI and AT&T believe are forward-looking) are reflective of the conditions in BellSouth's territory.

4. MCI and AT&T did not state the basis upon which their experts developed their estimates for the default values used in applying HAI R5.0a, and did not provide workpapers and sources associated therewith, where the basis for the default values was claimed to be "expert opinion."

(3)

ALTERNATIVE VALUES BASED UPON COST AND OTHER DATA SPECIFIC TO BELLSOUTH

The following BellSouth-specific values were obtained for the user-adjustable inputs that make up Sensitive Input Group 5:

1. Since this cost for buried installation is comprehensive and the accounting system does not specifically identify the additional cost for buried fiber sheathing, no additional amount for the buried fiber sheathing addition per foot (B-53) is required.

2. The BST-specific costs per foot of aerial fiber cable (B-57) including the costs of engineering, installation and delivery, as well as the material itself was determined for each cable size that is required by HAI R5.0a. The cost is determined using the method described by the authors of HAI R5.0a in the HIP. This method incorporates a constant installation cost per foot, independent on cable size, plus a variable material cost based on the cable size. The installation cost is computed on Exhibit 17, lines 55 - 67.

The resulting costs per foot are significantly lower than the default values in HAI R5.0a.

		Alabama	Florida	Georgia	Kentucky	Louisiana	Mississippi	N. Carolina	S. Carolina	Tennessee
Tax factors		1.0400	1.0600	1.0400	1.0600	1.0400	1.0700	1.0400	1.0500	1.0600
Installation cost		$ 1.87	$ 2.17	$ 1.66	$ 1.82	$ 1.68	$ 1.42	$ 2.07	$ 3.40	$ 1.58
Cable size	Material Cost	Installed Fiber Cable Cost								
216	$ 5.5770	$ 7.67	$ 8.08	$ 7.46	$ 7.73	$ 7.48	$ 7.39	$ 7.87	$ 9.26	$ 7.49
144	4.5354	6.59	6.98	6.38	6.63	6.40	6.27	6.79	8.16	6.39
96	2.5472	4.52	4.87	4.31	4.52	4.33	4.15	4.72	6.07	4.28
72	1.9745	3.92	4.26	3.71	3.91	3.73	3.53	4.12	5.47	3.67
60	1.6605	3.60	3.93	3.39	3.58	3.41	3.20	3.80	5.14	3.34
48	1.3954	3.32	3.65	3.11	3.30	3.13	2.91	3.52	4.87	3.06
36	1.1314	3.05	3.37	2.84	3.02	2.86	2.63	3.25	4.59	2.78
24	0.9229	2.83	3.15	2.62	2.80	2.64	2.41	3.03	4.37	2.56
18	0.7276	2.63	2.94	2.42	2.59	2.44	2.20	2.83	4.16	2.35
12	0.5787	2.47	2.78	2.26	2.43	2.28	2.04	2.67	4.01	2.19
Cost per strand/ft		$ 0.0690	$ 0.0760	$ 0.0650	$ 0.0690	$ 0.0650	$ 0.0610	$ 0.0730	$ 0.1010	$ 0.0640

HAI R5.0a also includes an input, shown in the last line above, for cost per strand/ft. The default input in HAI R5.0a is $0.10 per foot, which is approximately the default

cost per foot of 48 strand cable. The cost per strand/ft above is the recommended BST-specific cost per strand-foot for 48 strand cable.

Exhibit 8

Sensitive Input Group 6: Structure Placement Fractions

Exhibit 8

SENSITIVE INPUT GROUP 6: STRUCTURE PLACEMENT FRACTIONS

This Exhibit analyzes and evaluates HAI R5.0a default values, and identifies alternative values, for the following HAI R5.0a Appendix B user-adjustable inputs:

- B-5 Drop Structure Fractions
- B-17 Distribution Structure Fractions
- B-46 Copper Feeder Structure Fractions
- B-51 Fiber Feeder Structure Fractions
- B-121 Interoffice Structure Fractions

A description of each of these UAIs can be found in the HAI Model Release 5.0a Inputs Portfolio.

This Exhibit is structured in 3 parts: Part (1) identifies the UAIs in this Sensitive Input Group for which we have obtained forward-looking cost and other forward-looking data that is specific to BellSouth, Part (2) identifies the basis upon which MCI and AT&T state they have developed their default values for the UAIs in this Sensitive Input Group and contains some of our observations about these default values, and Part (3) identifies the alternative values to replace the default values in order to reflect forward-looking costs and other conditions, based on BellSouth data.

(1)
AVAILABILITY OF COST AND OTHER FORWARD-LOOKING DATA SPECIFIC TO BELLSOUTH

Forward-looking cost (*i.e.*, no embedded cost characteristics) and other forward-looking data specific to BellSouth have been obtained for the following user-adjustable inputs:

1. Input B-5 - Drop Structure Fractions

   - The structure fractions for aerial and buried drops.

2. Input B-17 - Distribution Structure Fractions

   - The fractions for aerial, buried and underground distribution cable.

3. Input B-46 - Copper Feeder Structure Fractions